

Claims

1. A method of transferring data between a first communications device and a second communications device, the second communications device having a first transceiver for communication at a first data rate over a long range, and a second transceiver for communicating at a second, higher data rate over a short range, the method comprising the steps of forming a co-ordinated short-range network (piconet) using the second communications device and a plurality of other similar communications devices, transferring a portion of said data to or from the first communications device from or to each of said second communications device and said other communications device using their first transceivers, and transferring said data portions between said other communications devices and the second communications device using their second transceivers.
2. A method as claimed in claim 1, wherein each of the second communications device and said other communications devices is a mobile telecommunications device.
3. A method as claimed in claim 1 or claim 2, wherein the second data rate is higher than the first data rate by a factor of two or more.
4. A method as claimed in any one of claims 1 to 3, wherein each second transceiver operates in accordance with the wireless networking protocol IEEE802.
5. A method as claimed in any one of claims 1 to 4, wherein the first transceiver of each of the second communications device and said other communications devices is such as to communicate with the base station of a cellular telecommunications network, and wherein the first communications device is also arranged to communicate with the base station.
6. A method as claimed in claim 5, wherein the first communications device includes a server which is arranged to instruct the base station to transfer respective

data portions to each of said second communications device and said other communications devices.

7. A method as claimed in claim 6, further comprising the step of multiplexing
5 said data portions at the second communications device.

8. A method as claimed in claim 7, wherein the server requests a stream of data
from a data provider in packets, and the server instructs the the base station to route
each data packet to a respective one of the second communications device and said
10 other communications devices, the totality of the packets routed to a given second or
other communications device constituting the data portion transferred to that
communications device.

9. A method as claimed in any one of claims 1 to 4, wherein the second
15 communications device transfers portions of data to be sent to the first communications
device to each of a plurality of said other communications devices by means of its
second transceiver and their second transceivers, the second communications device
instructs said other communications devices to transmit said data portions to the first
communications device, and the second communications device transmits the
20 remaining portion of the data to the first communications device.

10. A data transfer system comprising a first communications device and a
plurality of second communications devices, each of the second communications
devices having a first transceiver for communication with the first communications
25 device at a first data rate over a long range, and a second transceiver for communicating
with other second communications devices at a second, higher data rate over a short
range, wherein means are provided for co-ordinating the second communications
devices for transferring data to be communicated between the first communications
device and a given second communications device so that a respective portion of said
30 data is transferred between each of said second communications devices and the first
communications device using the first transceivers of said second communications

devices, and transferring said data portions between said second communications devices using their second transceivers.

11. A system as claimed in claim 10, wherein each of the second communication
5 devices is a mobile telecommunications device.

12. A system as claimed in claim 10 or claim 11, wherein the transceivers are such
that the second data rate is higher than the first data rate by a factor of two or more.

10 13. A system as claimed in any one claims 10 to 12, wherein each second
transceiver operates in accordance with the wireless networking protocol IEEE802.

14. A system as claimed in any one claims 10 to 13, further comprising a base
station of a cellular telecommunications network, the first transceivers of the second
15 communications devices being arranged to communicate with the base station, and the
first communications device being provided with a transceiver for communication with
the base station.

15. A system as claimed in claim 14, wherein the first communications device
20 further comprises a server which is arranged to instruct the base station to transfer
respective data portions to each of second communication devices.

16. A system as claimed in claim 15, wherein a given second communications
device comprises means for multiplexing all said data portions.

25 17. A system as claimed in claim 15, further comprising a data provider for
sending data to the server in packets, the server being such as to instruct the data
provider to label each data packet for transmission by the base station a respective one
of the second communications devices, the totality of the packets labeled for a given
30 second communications device constituting the data portion transferred to that
communications device.

18. A system as claimed in any one of claims 10 to 13, wherein a given second communications device is arranged to transfer portions of data to be sent to the first communications device to each of a plurality of the other second communications devices by means of its second transceiver and their second transceivers, the given
5 second communications device being such as to instruct said other second communications devices to transmit said data portions to the first communications device, and such that the given second communications device transmits the remaining portion of the data to the first communications device.
- 10 19. A method of transferring bandwidth to and from a communications device having first and second transceivers, the first transceiver being a long-range, low data rate transceiver, and the second transceiver being a short-range, high data rate transceiver, the method comprising utilising the first and second transceivers of similar communications devices situated within a short range network served by the second
15 transceivers of the communications devices, the data to be transferred to or from said communications device being transferred in portions between the communications devices using the second transceivers, and to and from a further communications device using the first transceivers of the communications devices.